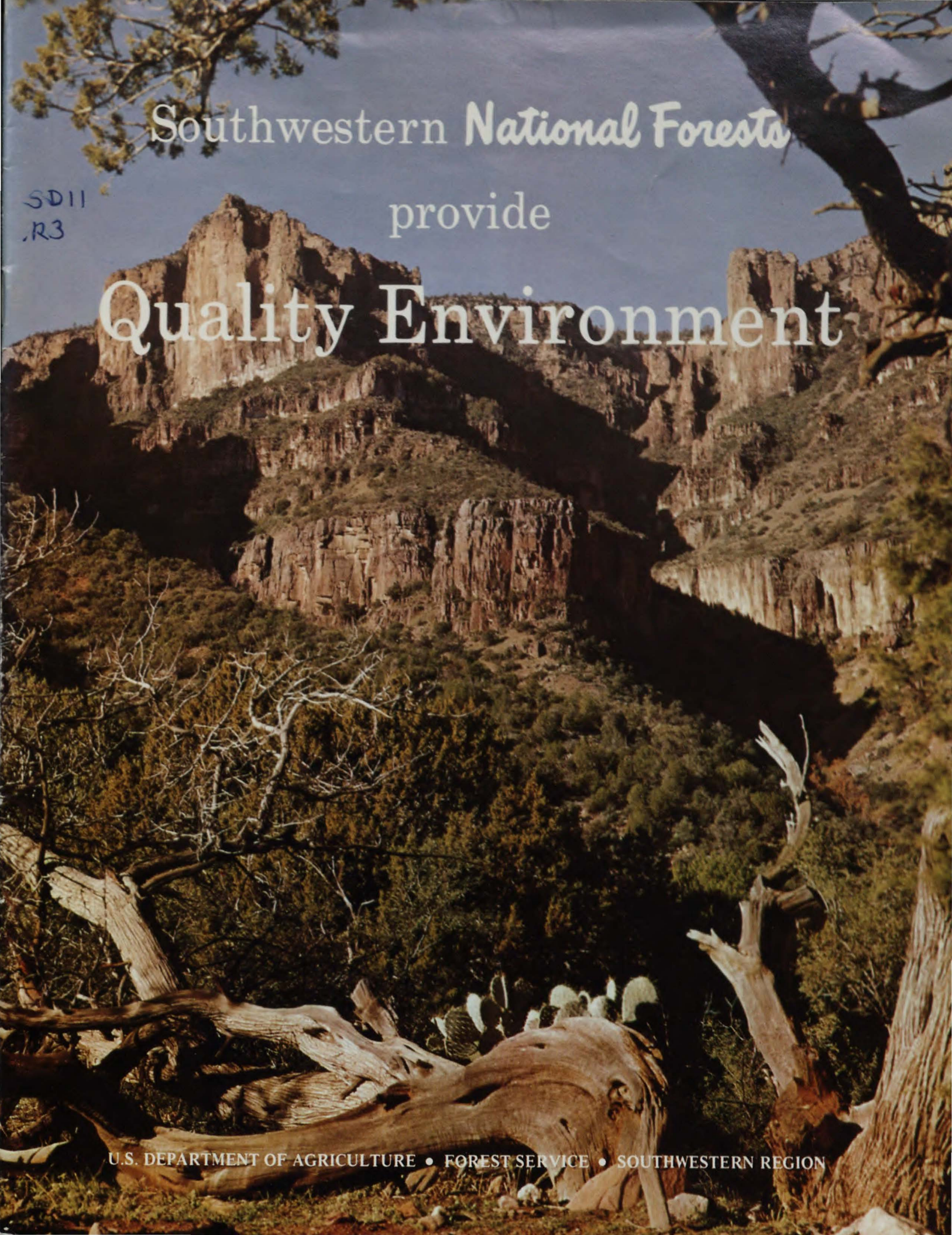




Southwestern *National Forests*

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provide

Quality Environment

U.S. DEPARTMENT OF AGRICULTURE • FOREST SERVICE • SOUTHWESTERN REGION



● Knoll Lake, Mogollon Rim Area, Coconino National Forest.

Cover Photo — Devil's Throne, Sierra Ancha Wilderness,
Tonto National Forest.

Today...

people everywhere are becoming increasingly concerned about the condition of the earth, and particularly the quality of life it offers, measured in terms of open space, visual attractive-

ness, and freedom from pollutants. There is worry, too, over the growing population and its effect on the land and its resources.

CONCERN FOR THE ENVIRONMENT IS NOT NEW

In many respects, *history is repeating itself*. Nearly a century ago, concern for the land and its resources led to establishment of the National Forests. In the late 1800's, a number of farsighted and public-spirited citizens were alarmed by the rapid exploitation of forest lands with little or no thought

given to future timber needs. Uncontrolled forest fires and unregulated grazing by domestic livestock were taking a heavy toll and the resulting erosion was damaging key water courses, agricultural land, and many communities.

THE BEGINNINGS OF NATIONAL FORESTS

Fortunately, Congress saw the danger and took action. Passage of the Creative Act of March 3, 1891, marked the beginning of the National Forest System by giving the President power to establish forest reserves from the public domain. On March 30, 1891, President Harrison created the first reserve — Yellowstone Timberland Reserve — an area of 1,239,000 acres. Before his term expired, President Harrison set aside forest reserves totaling almost 13.5 million acres. President Grover Cleveland proclaimed more than 4.5 million acres of new reserves during his administration.

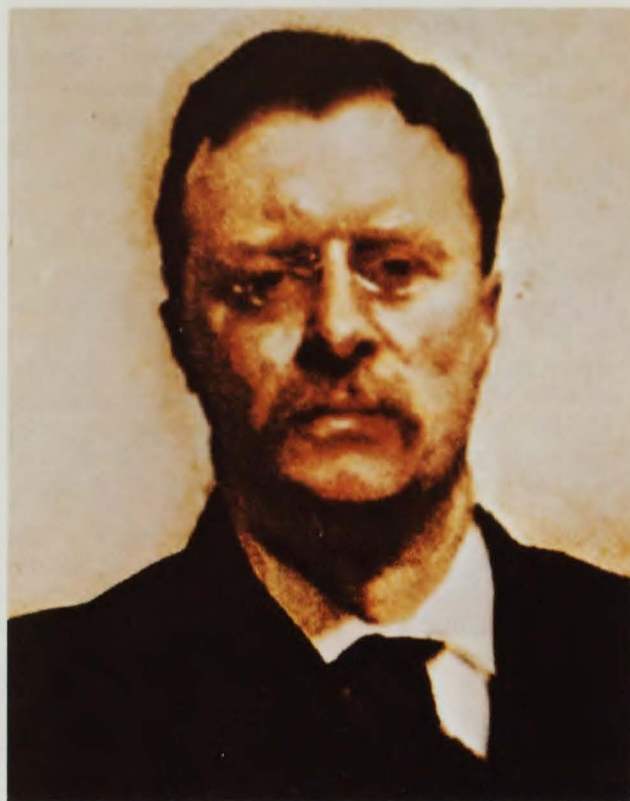
Showing continuing concern for the environment, Congress passed the Organic Administrative Act of June 4, 1897, defining the purpose of the forest reserves. It stated that "No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flow, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States." In addition, the Act of February 28, 1899, provided for recreational use of the reserves.

U.S. DEPARTMENT OF AGRICULTURE — FOREST SERVICE



Until 1905, the General Land Office in the Department of the Interior was in charge of the forest reserves. During the period 1901-1905, however, there was considerable agitation for transfer of the forest reserves to the Department of Agriculture. President Theodore Roosevelt sent messages to Congress urging the transfer. The American Forestry Congress, meeting in Washington, D.C. in 1905, adopted a resolution calling upon Congress to unify all forest work of the Government, including the forest reserves, in the Department of Agriculture. At this meeting, President Roosevelt declared that the objective of forestry is not to "lock up" forests but to consider "how best to combine use with preservation."

Transfer of forest reserves from the Department of the Interior to the Department of Agriculture was accomplished by the Act of February 1, 1905. Two years later the Act of March 4, 1907, stated "The forest reserves shall be known hereafter as national forests." This was done because "reserve" implied that the area was withdrawn from use, which was not true.



• Theodore Roosevelt recognized the many values of forest lands.

FOREST CONSERVATION GAINS STRENGTH

The establishment in 1905 of the Forest Service in its present form marked the real beginning of the conservation movement in this country. Gifford Pinchot, the outstanding conservationist of his day, became the first Chief Forester of the United States.

President Theodore Roosevelt and Gifford Pinchot were close personal friends and both appreciated the need for conserving our natural resources. As a result, during President Roosevelt's administration, 1901-1909, more than 148 million acres were added to the National Forests.

By 1908, more and more citizens were concerned with the condition of the land and its resources. In that year, President Roosevelt held the White House Conference of Governors to consider how to respond to the fact that the Nation's natural resources were being consumed, wasted, and destroyed at a rate that threatened them with exhaustion. Means of saving these resources were discussed, and a study commission was appointed. This National Conservation Commission was divided into four sections — minerals, waters, forests, and soils — with Gifford Pinchot as chairman. An inventory of resources was published in 1909.

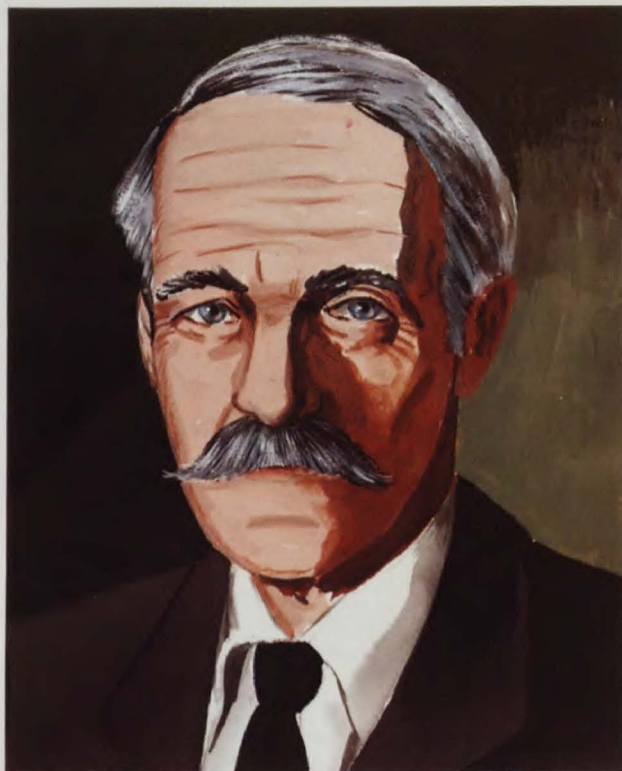
BALANCED MANAGEMENT FOR QUALITY ENVIRONMENT

THE MULTIPLE USE CONCEPT

Because of the circumstances that led to the need for and establishment of National Forests, the Forest Service has always felt responsible for developing management practices that either maintain or enhance the natural environment. From Gifford Pinchot's time until the present, the National Forests have been administered by the principle "the greatest good for the greatest number in the long run." In 1960, Congress passed the Multiple Use-Sustained Yield Act which affirms this principle.

The Act states, "it is the policy of the Congress that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." In carrying out this mandate, the Forest Service, through its Multiple Use Management planning process strives for coordination so that what is done with one resource benefits others. For example, when timber is harvested properly and slash cleaned up, more sunlight and precipitation reach the ground to stimulate the growth of plants beneficial to wildlife and livestock. It also improves watershed conditions.

Wood, water, forage, wildlife, and recreation resources never occur singly on National Forest land. They always occur in combination, but amount, type, and quality of each varies from area to area. This means that their use and management also will vary from area to area. On some land, all resources will be used about equally. On other areas, one, two, or more resources may be used much more intensively than others. Multiple Use Management finds and applies the best combination of uses on a particular area of land at a particular time, to meet the local, regional, and national needs of the American people.



• Gifford Pinchot, first chief of the Forest Service.

As public needs change, uses may change. But at all times, use is controlled so that the land's permanent ability to produce is not impaired. This is management for "sustained yield."



Quality Environment...

SOUTHWESTERN NATIONAL FORESTS TODAY



The numerous combinations of climate, elevations, precipitation, soils, and slope found within the Southwestern National Forests create unique vegetation zones, wildlife populations, and living conditions for modern man. There is torrid desert, dry pinyon and juniper woodlands, grassland, ponderosa pine forests, humid fir and spruce thickets, and treeless alpine tundra. Blue lakes and sparkling streams spice the vistas.

Public uses of Southwestern National Forests are as numerous as their resources. Trees are harvested for lumber, paper, and fuel. Livestock and wildlife feed on the grasses and shrubs. Water funnels from high forest watersheds to irrigated fields, homes, cities, and industry. Recreationists camp, hike, ride, ski, fish, hunt, swim, and follow a hundred other relaxing diversions on National Forest land. Consciously or not, people

seek its scenic beauty, the solitude of its wildernesses, and the satisfaction of public ownership.

All want quality management of their property, but what is environmental quality and how is it measured? There are no pat answers to these questions because there are no unbiased judges. Because each person sees differently, Forest Service management of National Forest environments can never satisfy or equally accommodate all. It can only apply to the best of its ability the growing store of information, the skills of specialists in related disciplines, the expression of personal public involvement, and constantly refined planning and management skills. This is environmental management. Its goal is quality management and the optimum satisfaction of the people of America.



• The public joins experts in planning management of the matchless Mogollon Rim area.



• The unique beauty of southwestern desert landscapes is unmatched. Tonto National Forest.



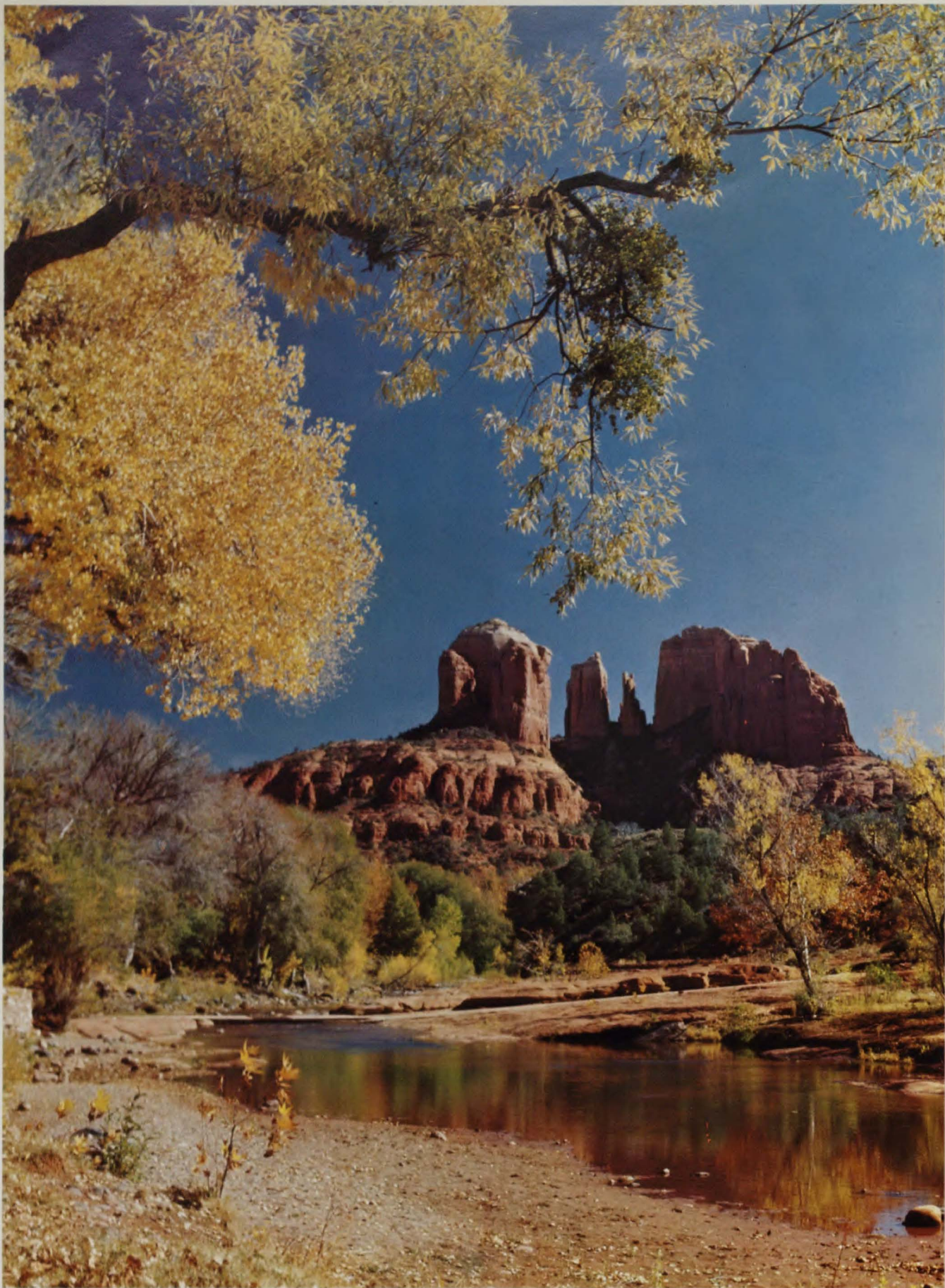
• Quiet beauty – Woods Canyon Lake, Sitgreaves National Forest.

PLACES TO ENJOY SCENIC BEAUTY

In addition to producing essential goods and services for the American people, the Southwestern National Forests offer varied scenic beauty unequaled by any other section of the country. Under the Forest Service's multiple use planning process, areas of outstanding scenic beauty are given special attention. No degrading work or uses are permitted. For example, if a forest highway is bounded by timbered slopes, the Forest Service recognizes these slopes as scenic backdrops to the highway. If timber harvesting is permitted on these slopes, it must be done in a way that does not impair natural beauty.



• National Forest beauty varies with elevation and seasons.



• Golden autumn foliage frames Cathedral Rock, Coconino National Forest.



• Sierra Blanca dominates a scene in the Lincoln National Forest.



• Pena Blanca Lake, Coronado National Forest.



• Campers enjoy a quality setting.

PLACES TO RELAX OR PLAY

The National Forests appeal to people in many ways and in all seasons. Many like to breathe the clean air, view the forest scenery, or just relax close to nature. Others like to camp or picnic, hunt or fish, or watch and photograph wildlife. For those who want more active outdoor recreation in a forest environment, there is swimming, water skiing, boating, snow skiing, snowshoeing, snowmobiling, hiking, horseback riding, and rock hounding.

In order to maintain and protect the forest environment, the Forest Service manages the Southwestern National Forests by

zones. The Travel Influence Zone includes areas adjacent to roads, trails, camp and picnic grounds, and ski lifts. In this Zone management is directed toward maintaining or enhancing the natural surroundings.

The Water Influence Zone is made up of areas of varying sizes along streams, rivers, lakes, and reservoirs where emphasis is placed on maintaining water quality and natural beauty.

In all work done on the National Forests, the Forest Service strives to achieve a quality environment.



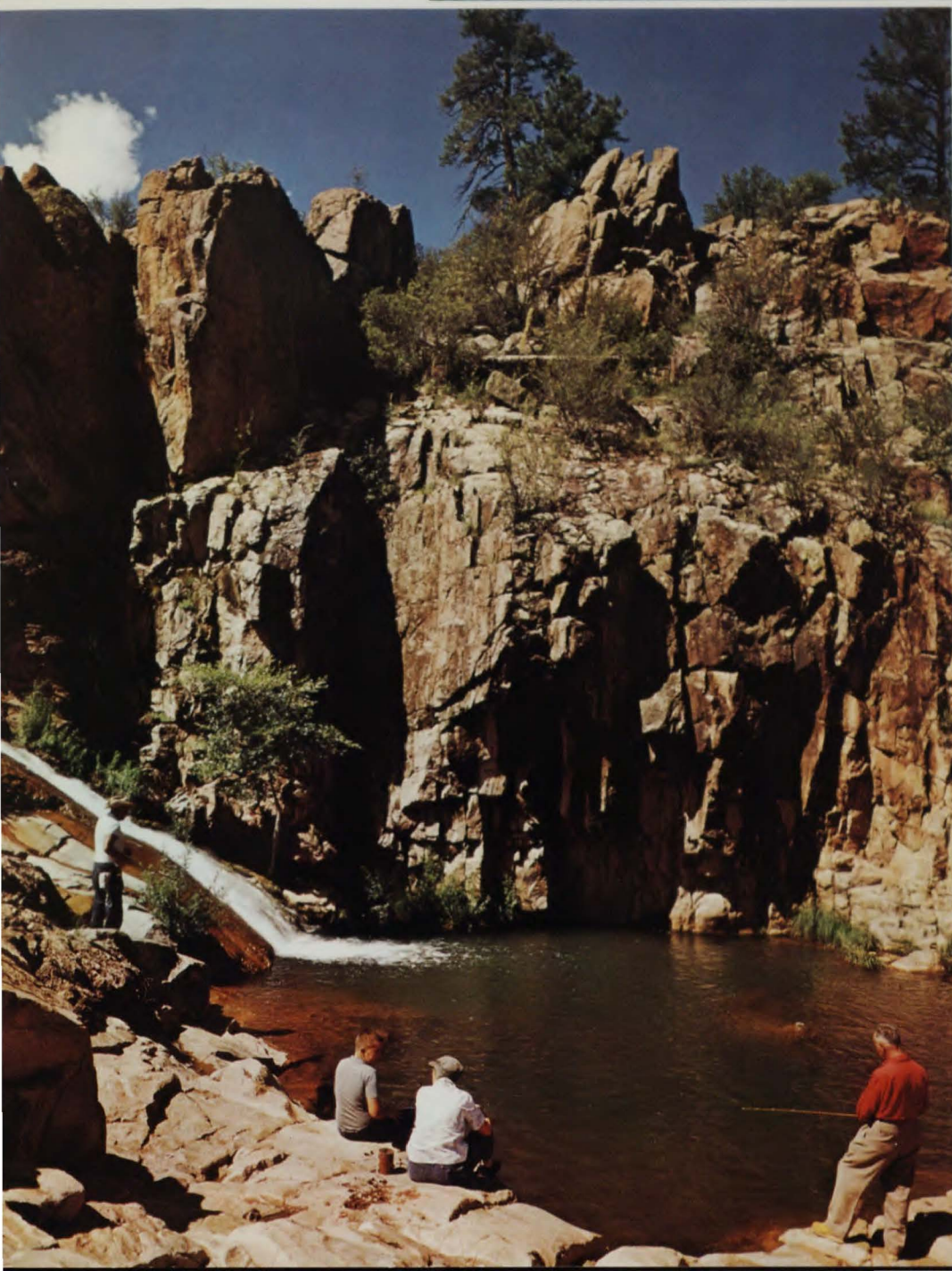
• Winter use of southwestern forest environments increases each year.



• Clear, clean, colorful water above Sitting Bull Falls, Lincoln National Forest.

• Water fun on Salt River Lakes,

Tonto National Forest.



• A place to forget problems

and lose worries.



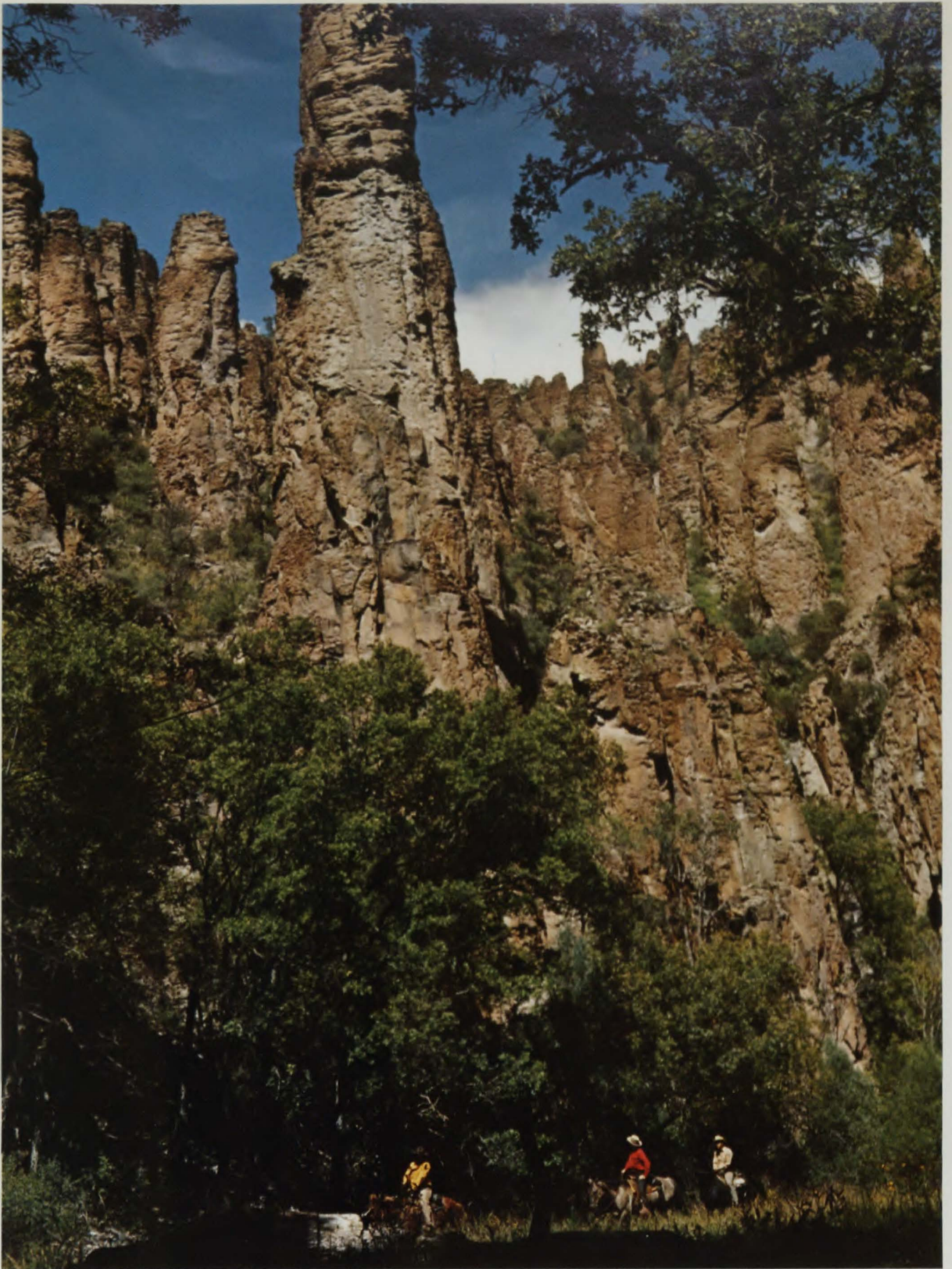
• Desert sky over the Superstition Wilderness.

WILDERNESS — A UNIQUE RESOURCE

Early in its history, the Forest Service recognized a need to set aside portions of the National Forests, not only as benchmarks of original plant and animal communities, but as retreats for man where he could commune with nature and reaffirm and reestablish life's values. In accordance with this philosophy, the Forest Service pioneered in creating Wildernesses and Primitive Areas within the National Forests for the use and enjoyment of people today and in the future. The Gila Wilderness, Gila National Forest, was established in 1924 mainly through the efforts of Aldo Leopold, early day Forest Service employee. Leopold later taught at the University of Wisconsin where he established a reputation as one of the

world's leading ecologists and environmentalists. His book, *Sand Country Almanac*, written many years ago, is recognized as a classic on environment.

In the 1930's, Robert Marshall, then Forest Service Chief of Recreation and Lands, played an important part in establishing a large number of additional Wildernesses and Primitive Areas in the National Forests. When the Wilderness Act was passed in 1964, there existed 79 National Forest Wildernesses and Primitive Areas totaling 14.5 million acres. In addition, through administrative action, the Forest Service has designated other special land units such as scenic areas, natural research areas, experimental ranges, and experimental forests.



● Riders find solitude in the Gila Wilderness, Gila National Forest.



● Sycamore Canyon Wilderness, virtually unaffected by man. Is this quality environment?



● Pecos Wilderness, Santa Fe National Forest — for some this is the ultimate in quality environment.



• Ponderosa pines dominate this forest scene.

PLACES TO PRODUCE WOOD

One of the original reasons for setting up National Forests was “to furnish a continuous supply of timber for the use and necessities of citizens of the United States.” Trees are a renewable natural resource and, if handled properly, the same piece of land can continue to produce crops of trees in perpetuity. However, like all living things, trees are subject to damage by fire, insects, diseases, and changes in climate. They require care and management.

The Intermediate Zone of the Southwestern National Forests includes areas favorable for the production of commercial sawtimber and forage. This Zone is also an important source of water and wildlife. It receives comparatively little public use. In this Zone, management emphasis is directed at producing sustained yields of timber, forage, water, and wildlife.

A careful on-the-ground survey is made of the timber and associated resources before National Forest timber is sold through competitive bidding. A timber sale contract covers a definite area and it outlines measures to be taken to reduce or minimize damage to the environment during timber harvest. The contract specifies locations of roads and trails, how trees are to be cut and removed, fire precautionary measures to be

observed, how slash will be disposed of, closing of roads and skid trails upon completion of sale, and type of plants to be used in reseeding disturbed soil. Trees to be cut are marked by a professional forester and a Forest Service officer supervises the sale from beginning to end to assure compliance with the sale contract.

In all timber harvesting operations on the National Forests, maintenance of a quality environment is a prime Forest Service consideration.

On the average timber sale, there are enough seed trees remaining after timber harvest to ensure regeneration through natural means. If for some reason there is insufficient natural regeneration, trees are planted by hand or machine.

After a severe fire, the Forest Service takes immediate action to prevent or minimize soil erosion by seeding the burned area with grasses. After the soil is stabilized, trees are planted if necessary.

Sometimes, young trees are so thick growth is stagnated. Under these conditions, the Forest Service thins out the stands to reduce fire hazard, speed up growth of the remaining trees, and improve the appearance of the forest.



• Under proper management forests meet the Nation's needs for wood products without losing environmental quality.





• Proper use of the forage resource does not damage this quality environment.

PLACES TO PRODUCE FOOD FOR LIVESTOCK AND WILDLIFE

From the very beginning, Congress intended that the natural resources of the National Forests were to be used for the good of the American people. With proper management, these resources can be used without damage to the quality of the environment.

The grasses and forage plants produced by the Southwestern National Forests provide food for domestic livestock and wildlife. To avoid damage to the range and the watershed, there must be a balance between animal numbers and their food supply. Where there has already been damage to the range resource, corrective action is taken. This may include reseeding with a mixture of plants that will benefit both livestock and wildlife. Fences may be constructed and watering places developed to secure better distribution of livestock. Where pinyons and junipers have invaded natural grasslands, some trees are removed. Others are left to provide escape and food areas for wildlife and to achieve a pleasing landscape. When a pinyon-juniper control project is complete, the desired result is an attractive park-like effect.

Because of the many life zones found in the Southwest, ranging from the cactus-studded desert to timberline and

above, a wide variety of wildlife depends upon the National Forests for their food and shelter. To maintain a quality wildlife habitat, wildlife numbers must be kept in balance with their food supply. This is particularly true of big game animals such as deer and elk. Before the days of scientific game management, the relationship between wildlife and their food supply was not fully understood. It was thought that the best thing to do was to protect the animals from predators and hunting. In areas where this was done, such as on the North Kaibab Division of the Kaibab National Forest in Arizona, the deer increased rapidly and within a short time they had literally eaten themselves out of "house and home." With their food plants destroyed, animals died of starvation by the thousands. Today, as a result of years of study, we better understand what is needed to keep wildlife populations healthy and in balance with food supplies. Controlled hunting is an effective way to accomplish this objective. At the same time it provides thousands of hours of healthful outdoor recreation. The Forest Service works with state game and fish departments who are responsible for determining proper game management measures and hunting seasons.



• National Forest resources are to use, enjoy and protect.



• Rocky Mountain Bighorn Sheep

• Javelina



• Elk





• Bald Eagle



• Mountain Lion



• Mule Deer



• Gray Jay



• Water from forest watersheds spills over Roosevelt Dam.

PLACES TO PRODUCE WATER

Life in Arizona and New Mexico is made possible by rain and snow that fall on the high mountains of the Southwestern National Forests. These public forests produce over half of the annual usable supply of water available to the two states. Because water is precious in the dry Southwest, the Forest Service exercises special care in the management of this resource needed by every living thing.



• Beauty is common in Oak Creek Canyon, Coconino National Forest.

As indicated earlier, the Forest Service manages the Southwestern National Forests by zones. In the Chaparral Zone, management emphasis is on water yield. In this Zone, where soil and topographic conditions are appropriate, there is an opportunity to increase water yield by changing the vegetation from forest to grass. This management technique is often used. In commercial timber type, cutting can be done where appropriate to increase stream flow. These are delicate manipulations and are only undertaken after careful study. As in all management practices on the National Forests, maintaining soil stability is a priority objective. This, of course, improves water quality.

The Water Influence Zone is made up of areas of varying sizes along streams, rivers, lakes, and reservoirs. It is generally outstanding in scenic beauty. Management emphasis is placed on maintaining or enhancing water quality and natural beauty of the Zone which also receives heavy use by recreationists and fishermen.

The Forest Service keeps a constant check on the quality of National Forest waters through a number of monitoring stations at strategic locations. Should there be any degrading noted in the quality of a particular body of water or of a stream, the Forest Service takes immediate steps to identify the source of pollution and determine how best to correct the trouble.

The many lakes, streams, and rivers on the Southwestern National Forests add greatly to the attractiveness of these lands, as well as supplying a vital commodity in the arid Southwest. They demand careful management.

● Water from National Forest

snowpacks . . .



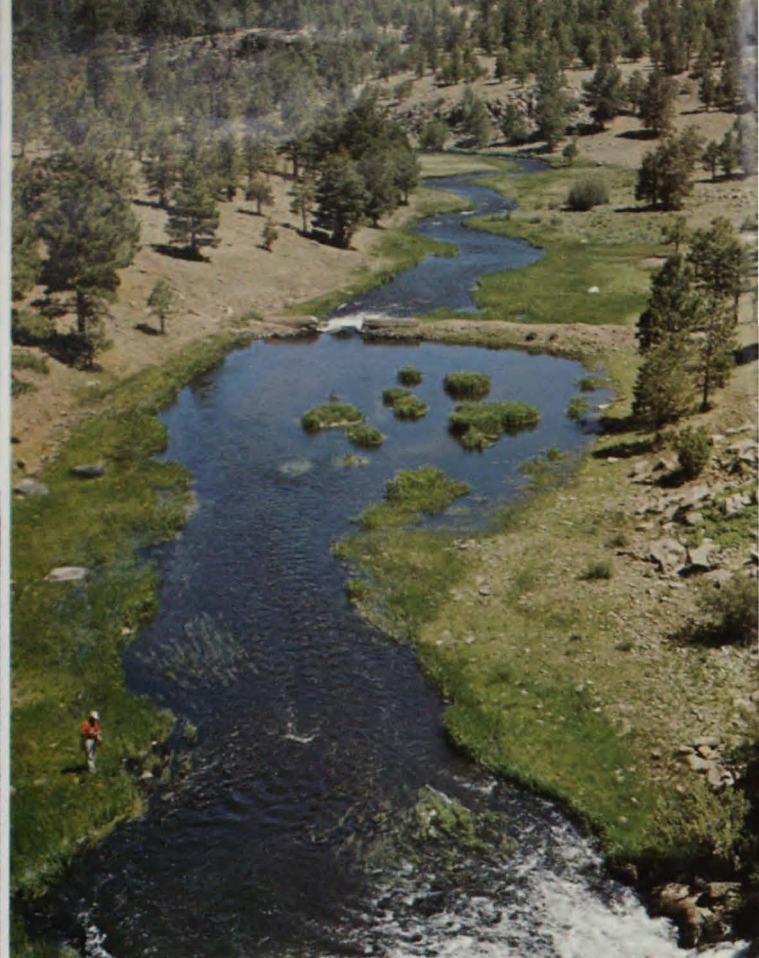
flows to valleys below . . .

to supply agriculture, industry,
recreation and
domestic needs.





• Fishing at Big Lake, Apache National Forest.



• Is this high quality environment? — Apache National Forest.



• A Visitor Information Service naturalist teaches conservation to young forest visitors.



THE FUTURE FOR QUALITY ENVIRONMENT

Man's activities constantly exert pressures and may leave marks on the landscape. Quality environments, however, can be protected, maintained, even enhanced, by diligent use of the tools of forest management.

LAND USE PLANNING

From a basic resource inventory (learning what is there) we can assess forest land capability as well as its sensitivity to man's actions. By relating capability and sensitivity to human needs we can plan to use land for optimum production while fully protecting its productivity for future human use as needs change.

NEW KNOWLEDGE

Research and experimentation constantly reveal new information and techniques to improve forest land management. For example, the use of prescribed or controlled burning as a special tool is now accepted as a useful management measure in the Southwest. Refinement of its application is proceeding rapidly.

SPECIALIST SKILLS

The growing complexity of natural resource administration demands the skills of geologists, soil scientists, plant pathologists, entomologists, engineers of many kinds, hydrologists, landscape architects, archeologists, wildlife biologists, plant ecologists, communications specialists, and professional foresters. All of these disciplines and often others must be involved in the search for a balanced mix of environmentally sound programs for resource protection and development.

PUBLIC INVOLVEMENT

Involvement of an informed and concerned public in the land and resource use decision-making process ensures that human needs are fully considered. Public involvement is recognized as an essential part of National Forest planning and management.

SUMMARY

Southwestern National Forests are the most scenic and vitally productive lands in the Southwest. To protect and enhance these highly diverse and complex lands requires application of the best management techniques and information available. Modern planning methods must be used and informed people must be involved in land use decisions. The goal is maintaining productive forest and range lands in a quality environment in your Southwestern National Forests, today and in the future.

Smokey Bear and Woodsy Owl say ...

Protect *Your* Forests!

KEEP WILDFIRE AND POLLUTION OUT OF THIS PICTURE ...

